



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,444	09/30/2003	Kasim Selcuk Candan	2503286-991120	7046
26379	7590	02/01/2008		
DLA PIPER US LLP 2000 UNIVERSITY AVENUE E. PALO ALTO, CA 94303-2248			EXAMINER MIRZA, ADNAN M	
			ART UNIT 2145	PAPER NUMBER
			MAIL DATE 02/01/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/676,444

**Applicant(s)**

CANDAN ET AL.

**Examiner**

ADNAN M. MIRZA

**Art Unit**

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter et al (U.S. 6,748,416) and further in view of Kataria et al (U.S. 6,687,229).

As per claims 1,17,24 Carpenter disclosed a method of distributing streaming data in a wide area network that comprises a plurality of autonomous systems having an overlay network of proxy servers, the method comprising communicating between a proxy server and neighboring proxy servers to identify proxy servers and data paths for providing a data stream to a requester that optimize utilization of network resources based upon a predetermined relationship that characterizes tensions of said proxy servers and data paths (col. 3, lines 39-59), said communicating comprising exchanging messages with said neighboring proxy servers (col. 3, lines 26-35);

However Carpenter failed to disclose activating an identified neighboring proxy server in response to said communicating to form a portion of a hierarchical overlay network structure of interconnected proxy servers that establish optimum data paths through the overlay network for supplying the data stream to said requester.

In the same field of endeavor Kataria disclosed, “A method according to one aspect of the invention provides an algorithm for shortest path selection on a single delay metric for data network connection. Both for the pre-computation of routing tables and for computation on-the-fly, either for a flat network or hierarchical network, path delay is accumulated by an additive method or an asymptotic method (col. 3, lines 45-52).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated a method according to one aspect of the invention provides an algorithm for shortest path selection on a single delay metric for data network connection. Both for the pre-computation of routing tables and for computation on-the-fly, either for a flat network or hierarchical network, path delay is accumulated by an additive method or an asymptotic method as disclosed by Kataria in the method and system of Carpenter in order to improve the performance and availability of networked applications, multiple functionally-equivalent intermediary servers are needed to provide service to a large number of clients.

3. As per claims 2,18,25 Carpenter-Kataria disclosed further comprising dynamically reconfiguring said hierarchical structure of proxy servers in response to said communicating as conditions change to maintain said optimum utilization of resources (Kataria , col. 10, lines 8-16).

4. As per claims 3,22 Carpenter-Kataria disclosed wherein said dynamically reconfiguring comprises changing the hierarchical network as loading changes (Kataria, col. 10, lines 27-40).

5. As per claims 4,21,27 Carpenter-Kataria disclosed wherein said dynamically reconfiguring comprises consolidating proxy servers to optimize loading on proxy servers as loading decreases (Carpenter, col. 6, lines 39-47).

6. As per claim 5 Carpenter-Kataria disclosed wherein said consolidating comprises consolidating the loads at a proxy server to optimize loading upon the loads dropping to a predetermined threshold (Carpenter, col. 6, lines 48-61).

7. As per claims 6,29 Carpenter-Kataria disclosed further comprising sending a consolidate message from a proxy server requesting consolidation of data loads to a neighboring proxy server upon data loads to said requesting proxy server dropping to a predetermined threshold (Carpenter, col. 6, lines 48-61).

8. As per claims 7,28 Carpenter-Kataria disclosed wherein said neighboring proxy server is selected to accept said data loads where consolidation of data loads at said neighboring proxy server would result in optimization of loading at such neighboring proxy server (Carpenter, col. 3, lines 39-59).

9. As per claims 8,20,30 Carpenter-Kataria disclosed wherein said dynamically reconfiguring comprises redistributing loads from said identified neighboring proxy server to another proxy server when the loading on said identified neighboring proxy servers reaches a predetermined threshold (Carpenter, col. 3, lines 39-59).

10. As per claims 9,26,31 Carpenter-Kataria disclosed further comprising sending a redistribute message requesting redistribution of data loads from said identified neighboring proxy server to another proxy server upon data loads at said identified neighboring proxy server reaching a predetermined threshold (Carpenter, col. 5, lines 26-49).

11. As per claim 10 Carpenter-Kataria disclosed wherein said neighboring proxy server is selected as a candidate to accept said data loads where redistribution of data loads at said neighboring proxy server would optimize loading at such neighboring proxy server (Carpenter, col. 7, lines 50-67).

12. As per claim 11 Carpenter-Kataria disclosed wherein said optimum utilization of network resources comprises optimizing network bandwidth (Kataria, col. 9, lines 26-41).

13. As per claims 12,33 Carpenter-Kataria disclosed wherein said activating comprises activating said proxy servers and paths to minimize tension (Kataria, col. 9, lines 26-41).

14. As per claims 13,32 Carpenter-Kataria disclosed wherein said predetermined relationship comprises a relationship between tension and load (Kataria, col. 9, lines 26-41).
15. As per claims 14,23 Carpenter-Kataria disclosed wherein said optimizing comprises activating proxy servers and paths that minimize costs (Kataria, col. 11, lines 56-65).
16. As per claim 15 Carpenter-Kataria disclosed wherein said activating comprises activating proxy servers based upon the loadings of the proxy servers (Carpenter, col. 5, lines 26-49).
17. As per claim 16 Carpenter-Kataria disclosed wherein said activating comprises activating proxy servers to reduce latency in the data paths between said proxy servers and said requesters (Carpenter, col. 7, lines 50-67).

***Response to Arguments***

18. Applicant's arguments filed 11/21/2007 have been fully considered but they are not persuasive. Response to applicant's arguments are as follows.

A. Applicant argued that examiner has not established a prima facie case of obviousness.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, It is obvious to combine Kataria in the method and system of Carpenter in order to improve the performance and availability of networked applications, multiple functionally-equivalent intermediary servers are needed to provide service to a large number of clients eventually reducing over head and latency cost.

B. Applicant argued that Carpenter and Kataria did not disclose, "Activating an identified neighboring proxy server in response to said communication to form a portion of hierarchical overlay network structure of interconnected proxy servers that establish optimum data paths through the overlay network for supplying the data stream to said requester".

As to applicant's argument Kataria disclosed, "Large networks are typically hierarchically arranged in peer groups. Within each peer group nodes acquire extensive knowledge of relevant network topology (col. 4, lines 44-46). A method according to one aspect of the invention provides an algorithm for shortest path selection on a single delay metric for data network connection. Both for the pre-computation of routing tables and for computation on-the-fly, either for a flat network or hierarchical network, path delay is accumulated by an additive method or an asymptotic method" (col. 3, lines 45-52).



***Conclusion***

**19. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

20. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Adnan Mirza whose telephone number is (571)-272-3885.

21. The examiner can normally be reached on Monday to Friday during normal business hours. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571)-272-3933. The fax for this group is (703)-746-7239. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2145

22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)-217-9197 (toll-free).

Adnan Mirza

/A. M. M./

Examiner, Art Unit 2145

/Jason D Cardone/  
Supervisory Patent Examiner, Art Unit 2145